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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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George I. Lee McDonnell Boehnen Hulbert & Berghoff 32nd Floor 300 S. Wacker Drive Chicago, IL 60606			EXAMINER	
			TRAN, QUOC A	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/843,036	TRAPANI ET AL.	
	Examiner	Art Unit	
	Tran A. Quoc	2176	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 16 February 2007.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-35 and 37-43 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) Claim(s) _____ is/are allowed.
6) Claim(s) 1-35, and 37-43 is/are rejected.
7) Claim(s) _____ is/are objected to.
8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413)
2) Notice of Draftsperson's Patent Drawing Review (PTO-948) Paper No(s)/Mail Date. ____ .
3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____ . 5) Notice of Informal Patent Application
6) Other: ____ .

DETAILED ACTION

1. This is a **Non-Final** rejection in response to RCE filed on 02-20-2007.
2. Claims 1-35 and 37-43 are pending, and claim 36 is previously canceled.
3. Effective filing date is 04-25-2001, priority date 04-26-2000.

Continued Examination Under 37 CFR 1.114

4. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 02-20-2007 has been entered.

Claims Rejections – 35 U.S.C. 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 1-15, 41-43 and 16-19 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. In particular, although these claims are direct to an “a computer-based system”, the body of the claims recites various steps “ a template normalizer...an automatic normalizer...and automatic normalized folderzies...” which appear directed to software per se, since the specification, at page 57 lines 3-10, describes that the

“computer or network system (hardware or software).” is not recites in conjunction with a physical structure (computer readable medium, memory), it appears that these claims are directed to software *per se*, which is non-statutory.

In addition, functional descriptive/non-functional descriptive material is recorded on some computer-readable medium; it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994)(discussing patentable weight of data structure limitations in the context of a statutory claim to a data structure stored on a computer readable medium that increases computer efficiency) and *Warmerdam*, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure *per se* held nonstatutory) also see MPEP 106.01 [R5].

In the interest of compact prosecution, the application is further examined against the prior art, as stated below, upon the assumption that the applicants may overcome the above stated rejections under 35 U.S.C. 101.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-35 and 37-43 are rejected under 35 U.S.C. 103(a) as being unpatentable by Bickmore et al. “Web Page Filtering and Re-Authoring for Mobile Users” Published 1999 by The Computer Journal, (hereinafter Bickmore), in view of Balasubramaniam et al. US006359633B1-filed 01-15-1999 (hereinafter Ba).

Regarding **independent claim 1**, Bickmore teaches:

a template normalizer for matching and applying a template to the information content, wherein the template defines modifications to the document in order to adapt the document for display on a device other than an originally intended device.

(See Bickmore at pages 534-546, also see Fig. 1, and 4-8, teaching the Digestor system automatically converts web-based documents designed for desktop viewing into formats appropriate for handheld devices with small display screens, such as Palm-PCs, PDAs, and cellular phones. Digestor can also be instructed, via a scripting language, to render portions of documents. For example the CSS, a single style sheet defines a set of display attributes for different structural portions of a document (e.g. all top-level section headings are to be displayed in red 18- point Times font). A series of style sheets may be attached to a document, each with a

weight describing its desirability to the document's author. The user can also specify a style sheet, as can the WWW browser using the 'default' style sheet. Although the author's style sheets normally override the user's, the user can selectively enable or disable the author's, providing them with the ability to tailor the rendering of the document to their particular display). Using the broadest reasonable interpretation, the Examiner equates the claimed a **template** as equivalent to a single style sheet defines a set of display attributes for different structural portions of a document, and also the claimed **normalizer** as equivalent to Digestor system, automatically converts web-based documents, wherein a series of style sheets may be attached to a document, each with a weight describing its desirability to the document's author as taught by Bickmore.)

an automatic normalizer for folderizing the information content,

(See Bickmore at pages 535 section 2.3, teaching automatic re-authoring, wherein an arbitrary web document designed for the desktop, along with the characteristics of the target display device, and re-author the document through a series of transformations so that it can be appropriately displayed on the device.

Also see Bickmore page 535 section 2.5, teaching page filtering. Using the broadest reasonable interpretation, the Examiner equates the claimed a **automatic normalizer for folderizing** as equivalent to automatic re-authoring and page filtering as taught by Bickmore. And since the specification, at page 57 lines 3-10, describes that the "computer or network system (hardware or software)." is not because, the current application specification discloses)

wherein the template normalizer attempts to match a template to the information content, and if not the automatic normalizer for folderizing the information content to produce a normalized information content,

(See Bickmore at pages 534-546, also see Fig. 1, disclosed the Digestor system automatically converts web-based documents designed for desktop viewing into formats appropriate for handheld devices with small display screens, such as Palm-PCs, PDAs, and cellular phones.

Also see Bickmore fig. 8 and also page 542 second right column last two para- section 3.4.3, teaching the filtering processes, wherein the text blocks of the document in sequence looking for a match within each. When a match is found; it is marked by setting the current context to the text block node and annotating it with the fact that the match is actually on a substring of the node and the start and end indices of the substring within the text block. In table processing, table, row and cell navigation are straightforward (assuming the HTML model of a table consisting of rows each of which consists of cells). Using the broadest reasonable interpretation, the Examiner equates the claimed a **template normalizer** as equivalent to automatic re-authoring and page filtering as taught by Bickmore.)

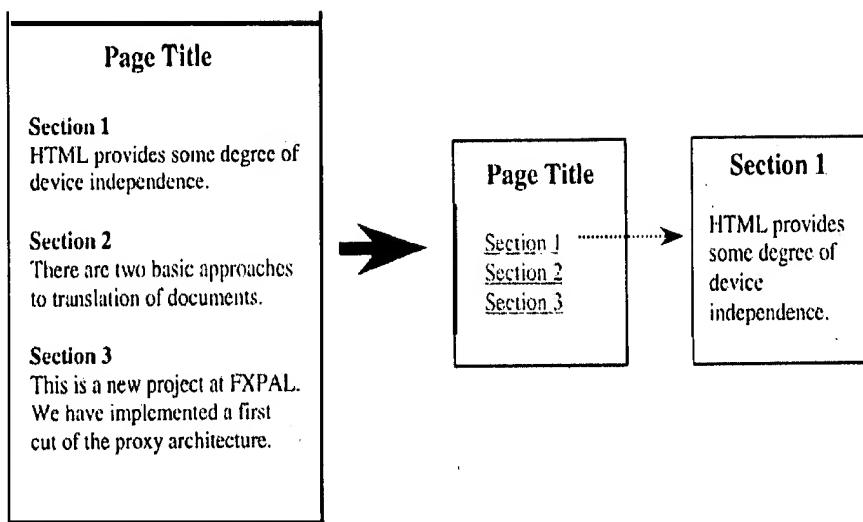


FIGURE 4. Section outlining transform.

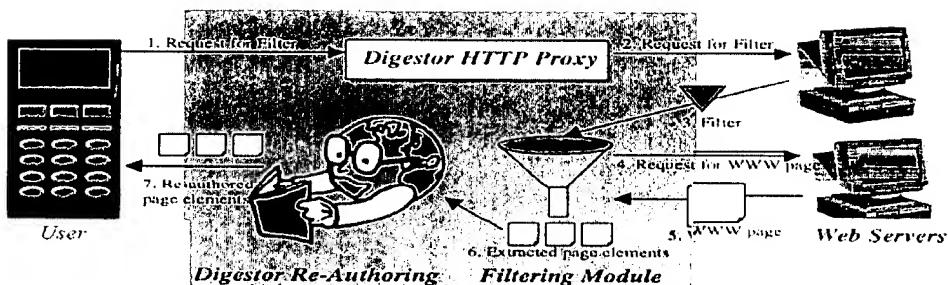


FIGURE 7. Example of dataflow in the document filtering module.

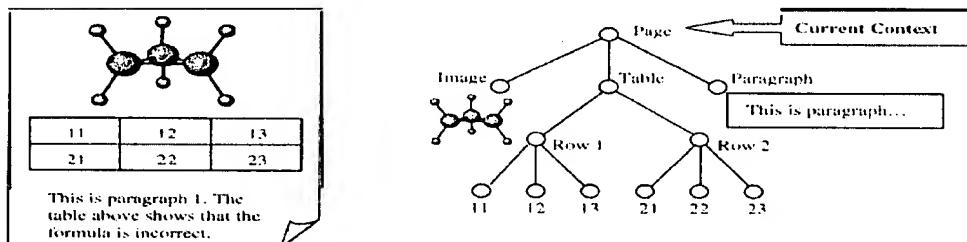


FIGURE 8. Example WWW page and corresponding AST. The current context is set to root of the AST

wherein the automatic normalizer folderizes the information content by identifying content having a higher visibly on a display of the originally intended device,

(See Bickmore at pages 534-546, also see Fig. 1, disclosed the Digestor system automatically converts web-based documents designed for desktop viewing into formats appropriate for handheld devices with small display screens, such as Palm-PCs, PDAs, and cellular phones.

Also, see Bickmore page 538 section 3.3 Automatic re-authoring in Digestor, teaching the table transform uses heuristics to determine when table columns are being used as 'navigational sidebars' (common practice in commercial HTML web pages) and moves these cells to the end of the list of sub-pages since they tend to carry very little content (Figure 5), marking tables with thicker borders than table cells. Cell 1 is identified as sidebar and will be placed after cell 6. All the other cells are placed in their natural order. The portions of cell 4, 4a and 4b, are each placed on their own sub-page unless they contain only white space.

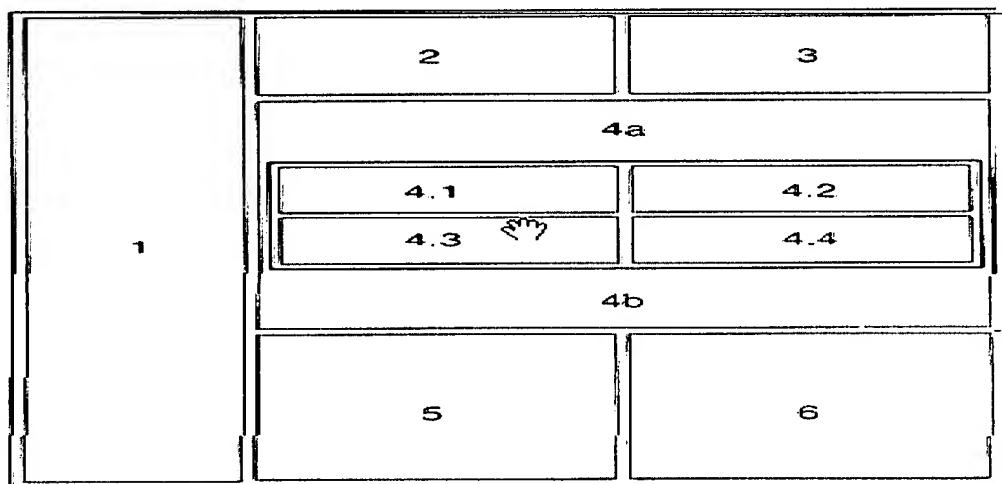


FIGURE 5. Nested table.

Using the broadest reasonable interpretation, the Examiner equates the claimed **a higher visibly on a display** as equivalent to automatic re-authoring and marking tables with thicker borders than table cells as taught by Bickmore.)

In addition, Bickmore does not explicitly teach, but Ba teaches:

wherein the information content is organized into a set of hierarchical nodes having respective weights, and where a weight determines whether a node will be inserted into a normalized document as a folder title or folder contents,

(See Ba at col. 3 lines 40-55, teaching each node of the tree is then analyzed statistically (step 204) by a statistical analyzer 254 to collect information, which can be used to create an annotated syntax tree. The statistics at a node can include attributes of that node such as the size of its content, the number of URLs in the content, and the statistics of a node can also include a label for that node, wherein statistical analysis is done heuristically in the bottom-up manner, moving from children nodes to their parent node. Using the broadest reasonable interpretation, the Examiner reads the claimed **weight** as equivalent to heuristically as taught by Ba.)

wherein the automatic normalizer folderizes the information content by identifying content having a higher visibly on a display of the originally intended device,

(See Ba at col. 1 line 65 through col. 2, line 15, teaching the summarization step can be performed heuristically input from a user for grouping process which can depend on the output

device and the connection to the output device. This grouping process can also depend on the class a node belongs to, and user preferences.

Also, see Ba at col. 1 line 65 through col. 2, line 15, teaching the summarization step can be performed heuristically input from a user for grouping process which can depend on the output device and the connection to the output device. This grouping process can also depend on the class a node belongs to, and user preferences.)

**Wherein a folder can be expanded to display the information content, and
wherein unexpanded folder titles are displayed along the information
content of the expanded folder.**

(See Ba at col. 2 lines 1-10, teaching the a summarized version of the document, wherein summarization step includes grouping, and groups a predetermined number of nodes together, and may give this set of nodes a group-name, and the numbers of levels (renamed as group-levels) and nodes (renamed as group-nodes) in the tree are reduced. Each group encapsulates more information than those in each of its nodes. Using the broadest reasonable interpretation, Examiner equates the claimed **a folder can be expanded... unexpanded** as equivalent to a summarized version of the document includes group-name, and the numbers of levels (renamed as group-levels) and nodes (renamed as group-nodes) in the tree, wherein each group encapsulates more information than those in each of its nodes as Ba.)

Also, see Ba at col. 2 lines 1-10, teaching the summarization step includes grouping, and groups a predetermined number of nodes together, and may give this set of nodes a group-name. Due to grouping, the numbers of levels (renamed as group-levels) and nodes (renamed as

group-nodes) in the tree are reduced. Each group encapsulates more information than those in each of its nodes.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified the teaching of Bickmore, to include a means of organizing the information content into a set of hierarchical nodes having respective weights, and where a weight determines whether a node will be inserted into a normalized document as a folder title or folder contents, wherein the automatic normalizer folderizes the information content by identifying content having a higher visibility on a display of the originally intended device, and wherein a folder can be expanded to display the information content, and wherein unexpanded folder titles are displayed along the information content of the expanded folder as taught by Ba. One of ordinary skill in the art would have been motivated to perform such a modification to provide an automatic re-authoring of web documents to make them automatically converts web-based documents designed for desktop viewing into formats appropriate for handheld devices with small display screens, such as Palm-PCs, PDAs, and cellular phones (as taught by Bickmore at page 534)..

Regarding **independent claim 16**, the rejection of claim 1 is fully incorporated.

In addition, Bickmore teaches:

wherein if a node has no effect on a visual display of the information content and the node is not folder content, the node is removed,

(Bickmore fig. 4-8 and at pages 534--546, “Automated re-authoring system”, discloses an automated re-authoring system that implements the re-authoring engine that uses heuristics to

generate pages customized for the specific device upon which they will be displayed. If screen space is too limited or the client device cannot display images; Digestor will remove them from the document. Also provides the CSS, a single style sheet defines a set of display attributes for different structural portions of a document (e.g. all top-level section headings are to be displayed in red 18- point Times font). A series of style sheets may be attached to a document, each with a weight describing its desirability to the document's author.)

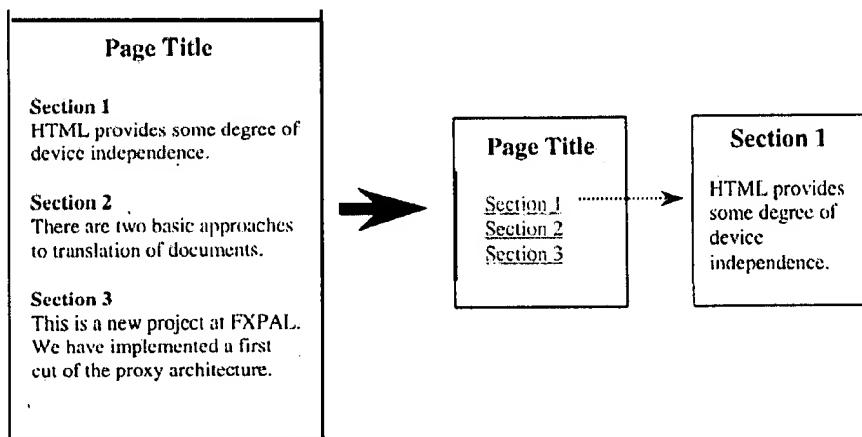


FIGURE 4. Section outlining transform.

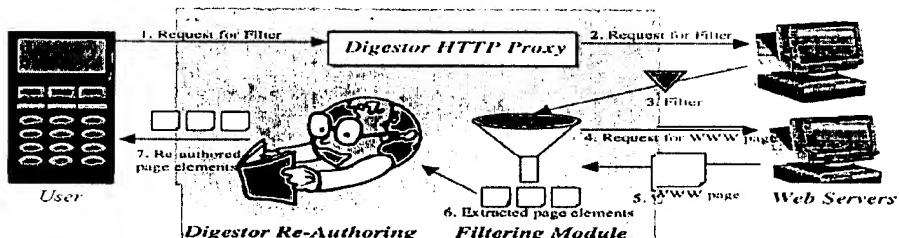


FIGURE 7. Example of dataflow in the document filtering module.

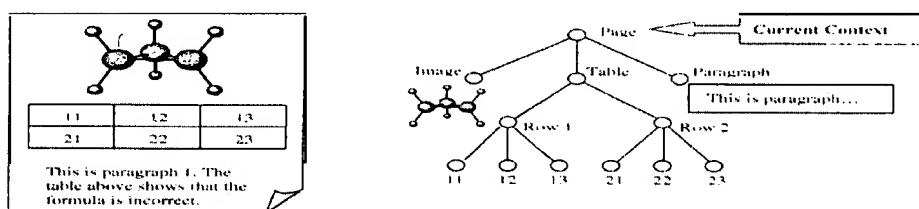


FIGURE 8. Example WWW page and corresponding AST. The current context is set to root of the AST

Regarding **independent claim 20**, the rejection of claim 1 is fully incorporated.

Regarding **independent claim 23**, the rejection of claim 1 is fully incorporated.

In addition, Bickmore teaches:

using a processor executing one or more instructions.

(See Bickmore fig. 1 at page 534, disclosed a desktop computer.)

**wherein the normalization markup provide at least one specific
instruction for normalizing the information content,**

(See Bickmore at pages 534-546, also see Fig. 1, disclosed automatic re-authoring of web documents, there is simply too much Digestor allows users to extract only the portions of documents that they are interested in, via a simple, end-user scripting language that combines structural page navigation commands with regular expression pattern matching and report generation functions.)

Regarding **independent claim 27**, the rejection of claims 1 and 16 are fully incorporated.

In addition, Bickmore does not explicitly teach, but Ba teaches:

**determining parent-child relationships between the weighted nodes
based on the weighted nodes to produce a normalized document tree,
wherein a weighted node is established as a child of a parent having the
lightest weight of all the parents that is also greater than the weight of the
weighted node.**

(See Ba at col. 3 lines 40-55, teaching each node of the tree is then analyzed statistically (step 204) by a statistical analyzer 254 to collect information, which can be used to create an annotated syntax tree. The statistics at a node can include attributes of that node such as the size of its content, the number of URLs in the content, and the statistics of a node can also include a label for that node, wherein statistical analysis is done heuristically in the bottom-up manner, moving from children nodes to their parent node. Using the broadest reasonable interpretation, the Examiner reads the claimed **weight** as equivalent to heuristically as taught by Ba.)

Also, See Ba at col. 1 line 65 through col. 2, line 15, teaching the summarization step can be performed heuristically input from a user for grouping process which can depend on the output device and the connection to the output device. This grouping process can also depend on the class a node belongs to, and user preferences.

Also, see Ba at col. 1 line 65 through col. 2, line 15, teaching the summarization step can be performed heuristically input from a user for grouping process which can depend on the output device and the connection to the output device. This grouping process can also depend on the class a node belongs to, and user preferences.)

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified the teaching of Bickmore, to includes a means of determining parent-child relationships between the weighted nodes based on the weighted nodes to produce a normalized document tree, wherein a weighted node is established as a child of a parent having the lightest weight of all the parents that is also greater than the weight of the weighted node as taught by Ba. One of ordinary skill in the art would have been motivated to perform such a modification to provides an automatic re-authoring of web documents to make

them automatically converts web-based documents designed for desktop viewing into formats appropriate for handheld devices with small display screens, such as Palm-PCs, PDAs, and cellular phones (as taught by Bickmore at page 534).

Regarding **independent claim 31**, the rejection of claims 1 and 20 are fully incorporated.

In addition, Bickmore teaches:

Receiving data; and storing information relating to the data into a plurality of arrays, wherein the plurality of arrays utilize re-usable buffers, and wherein the stored information describes the document object tree and tree dependencies as a mutable object,

(See Bickmore at pages 534-546, also see Fig. 1, further discloses the Java in collaborating with hash tables to represent attribute-value pairs attached to each node in the parse tree. whenever a parse tree was copied during a transform. Representing attribute-value pairs as object arrays that were searched linearly increased the performance significantly. Vectors provided a convenient means for representing the children of a node in the parse tree that supported the addition and deletion of children.)

In addition, Bickmore does not explicitly teach, but Ba teaches:

wherein separate arrays are used to store values representing properties of each node including properties selected from the group consisting of a parent node a previous sibling node and a next sibling node,

and a first child nod, wherein the plurality of arrays contain values associated with the nodes of the data, and wherein operations on the nodes can be carried out by utilizing the value as referenced to the affected nodes,

(See Ba at col. 3 lines 40-55, teaching each node of the tree is then analyzed statistically (step 204) by a statistical analyzer 254 to collect information, which can be used to create an annotated syntax tree. The statistics at a node can include attributes of that node such as the size of its content, the number of URLs in the content, and the statistics of a node can also include a label for that node, wherein statistical analysis is done heuristically in the bottom-up manner, moving from children nodes to their parent node. Using the broadest reasonable interpretation, the Examiner reads the claimed **arrays contain values associated with the nodes** as equivalent to syntax tree. The statistics at a node can include attributes of that node such as the size of its content, the number of URLs in the content, and the statistics of a node can also include a label for that node, wherein statistical analysis is done heuristically in the bottom-up manner, moving from children nodes to their parent node as taught by Ba.)

Also, See Ba at col. 1 line 65 through col. 2, line 15, teaching the summarization step can be performed heuristically input from a user for grouping process which can depend on the output device and the connection to the output device. This grouping process can also depend on the class a node belongs to, and user preferences.

Also, see Ba at col. 1 line 65 through col. 2, line 15, teaching the summarization step can be performed heuristically input from a user for grouping process which can depend on the output device and the connection to the output device. This grouping process can also depend on the class a node belongs to, and user preferences.)

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified the teaching of Bickmore, to include a means of determining separate arrays are used to store values representing properties of each node including properties selected from the group consisting of a parent node a previous sibling node and a next sibling node, and a first child node, wherein the plurality of arrays contain values associated with the nodes of the data, and wherein operations on the nodes can be carried out by utilizing the value as referenced to the affected nodes as taught by Ba. One of ordinary skill in the art would have been motivated to perform such a modification to provide an automatic re-authoring of web documents to make them automatically convert web-based documents designed for desktop viewing into formats appropriate for handheld devices with small display screens, such as Palm-PCs, PDAs, and cellular phones (as taught by Bickmore at page 534).

Regarding **independent claim 39**, the rejection of claims 1 and 20 are fully incorporated.

In addition, Bickmore teaches:

Applying changes to the document tree according to the template markup language.

(See Bickmore at pages 534-546, See Bickmore at pages 534-546, also see Fig. 1, disclosed the Digestor system automatically converts web-based documents designed for desktop viewing into formats appropriate for handheld devices with small display screens, such as Palm-PCs, PDAs, and cellular phones.

Also see Bickmore fig. 8 and also page 542 second right column last two para- section 3.4.3, teaching the filtering processes (assuming the HTML model of a table consisting of rows each of which consists of cells).

Regarding **claims 2-15**, the rejection of claims 16, 23 and 39 are fully incorporated, and are similarly rejected along the same rationale.

Regarding **claims 17-19**, the rejection of claim 1, and 39 are fully incorporated, and are similarly rejected along the same rationale.

Regarding **claims 21-22**, the rejection of claim 16 is fully incorporated, and are similarly rejected along the same rationale.

Regarding **claims 24-26**, the rejection of claims 16, and 39 are fully incorporated, and are similarly rejected along the same rationale.

Regarding **claims 28-30**, the rejection of claims 16, 31 and 39 are fully incorporated, and are similarly rejected along the same rationale. In addition:

Bickmore does not explicitly teach, but Ba teaches:

weighting nodes in a table; and attempting to match the table to a predefined pattern of weights, and if successful: extracting data in response to the predefined pattern.

(See Ba at col. 3 lines 40-55, teaching each node of the tree is then analyzed statistically (step 204) by a statistical analyzer 254 to collect information, which can be used to create an annotated syntax tree. The statistics at a node can include attributes of that node such as the size of its content, the number of URLs in the content, and the statistics of a node can also include a label for that node, wherein statistical analysis is done heuristically in the bottom-up manner, moving from children nodes to their parent node. Using the broadest reasonable interpretation, the Examiner reads the claimed **weighting** as equivalent to heuristic as taught by Ba.

Also, See Ba at col. 1 line 65 through col. 2, line 15, teaching the summarization step can be performed heuristically input from a user for grouping process which can depend on the output device and the connection to the output device. This grouping process can also depend on the class a node belongs to, and user preferences.

Also, see Ba at col. 1 line 65 through col. 2, line 15, teaching the summarization step can be performed heuristically input from a user for grouping process which can depend on the output device and the connection to the output device. This grouping process can also depend on the class a node belongs to, and user preferences.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified the teaching of Bickmore, to includes a means of weighting nodes in a table; and attempting to match the table to a predefined pattern of weights, and if successful: extracting data in response to the predefined pattern as taught by Ba. One of ordinary skill in the art would have been motivated to perform such a modification to provides an automatic re-authoring of web documents to make them automatically converts web-based documents designed for desktop viewing into formats appropriate for handheld devices with

small display screens, such as Palm-PCs, PDAs, and cellular phones (as taught by Bickmore at page 534).

Regarding **claims 32-35, and 37-38**, the rejection of claim 1 is fully incorporated, and is

similarly rejected along the same rationale. In addition Bickmore teaches:

transforming the document object tree, wherein the transformed document object tree is represented by the single mutable object; normalizing the document object tree model by a template normalizer for applying templates to the document object tree.

(See Bickmore at pages 534-546, disclosed the Digestor system automatically converts web-based documents designed for desktop viewing into formats appropriate for handheld devices with small display screens, such as Palm-PCs, PDAs, and cellular phones.

Also see Bickmore fig. 8 and also page 542 second right column last two para- section 3.4.3, teaching the filtering processes (assuming the HTML model of a table consisting of rows each of which consists of cells.

Also, see Bickmore page 541 section 3.4, teaching Digestor's scripting language using Consortium's Document Object Model [30] specification defines a mechanism for navigating the elements of a page from within a browser program or script (e.g. Java or JavaScript).)

In addition, Bickmore does not explicitly teach, but Ba teaches:

adding an array to the plurality of arrays as the received data grows in size, wherein the plurality of arrays are used to hold the associated values that

represent properties of the nodes of the document object tree, referencing a re-usable content buffer that contains data; wherein the plurality of arrays store start and end positions of data that reference the data stored in the re-usable content buffer.

(See Ba at col. 3 lines 40-55, teaching each node of the tree is then analyzed statistically (step 204) by a statistical analyzer 254 to collect information, which can be used to create an annotated syntax tree. The statistics at a node can include attributes of that node such as the size of its content, the number of URLs in the content, and the statistics of a node can also include a label for that node, wherein statistical analysis is done heuristically in the bottom-up manner, moving from children nodes to their parent node. Using the broadest reasonable interpretation, the Examiner reads the claimed **weighting** as equivalent to heuristic as taught by Ba.

Also, See Ba at col. 1 line 65 through col. 2, line 15, teaching the summarization step can be performed heuristically input from a user for grouping process which can depend on the output device and the connection to the output device. This grouping process can also depend on the class a node belongs to, and user preferences.

Also, see Ba at col. 1 line 65 through col. 2, line 15, teaching the summarization step can be performed heuristically input from a user for grouping process which can depend on the output device and the connection to the output device. This grouping process can also depend on the class a node belongs to, and user preferences.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified the teaching of Bickmore, to includes a means of adding an array to the plurality of arrays as the received data grows in size, wherein the plurality of

arrays are used to hold the associated values that represent properties of the nodes of the document object tree, referencing a re-usable content buffer that contains data; wherein the plurality of arrays store start and end positions of data that reference the data stored in the re-usable content buffer as taught by Ba. One of ordinary skill in the art would have been motivated to perform such a modification to provides an automatic re-authoring of web documents to make them automatically converts web-based documents designed for desktop viewing into formats appropriate for handheld devices with small display screens, such as Palm-PCs, PDAs, and cellular phones (as taught by Bickmore at page 534).

Regarding **claims 41-43**, the rejection of claims 16, and 20 are fully incorporated, and are similarly rejected along the same rationale.

Regarding **claim 40**, Bickmore does not explicitly teach, but Ba teaches:

the document tree is represented by a plurality of nodes, and wherein applying changes to the document tree according to the template markup language comprises adding a node to the plurality of nodes, dropping at least one of the plurality of nodes, moving at least one of the plurality of nodes, partitioning at least one of the plurality of nodes into folders, or calling user defined formatting rules on at least one of the plurality of nodes.

(See Ba at col. 3 lines 40-55, teaching each node of the tree is then analyzed statistically (step 204) by a statistical analyzer 254 to collect information, which can be used to create an annotated syntax tree. The statistics at a node can include attributes of that node such as the size

of its content, the number of URLs in the content, and the statistics of a node can also include a label for that node, wherein statistical analysis is done heuristically in the bottom-up manner, moving from children nodes to their parent node. Using the broadest reasonable interpretation, the Examiner reads the claimed **document tree** as equivalent to syntax tree as taught by Ba.

Also, See Ba at col. 1 line 65 through col. 2, line 15, teaching the summarization step can be performed heuristically input from a user for grouping process which can depend on the output device and the connection to the output device. This grouping process can also depend on the class a node belongs to, and user preferences.

Also, see Ba at col. 1 line 65 through col. 2, line 15, teaching the summarization step can be performed heuristically input from a user for grouping process which can depend on the output device and the connection to the output device. This grouping process can also depend on the class a node belongs to, and user preferences.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified the teaching of Bickmore, to include a means of the document tree is represented by a plurality of nodes, and wherein applying changes to the document tree according to the template markup language comprises adding a node to the plurality of nodes, dropping at least one of the plurality of nodes, moving at least one of the plurality of nodes, partitioning at least one of the plurality of nodes into folders, or calling user defined formatting rules on at least one of the plurality of nodes as taught by Ba. One of ordinary skill in the art would have been motivated to perform such a modification to provide an automatic re-authoring of web documents to make them automatically convert web-based documents designed for desktop viewing into formats appropriate for handheld devices with

small display screens, such as Palm-PCs, PDAs, and cellular phones (as taught by Bickmore at page 534).

7. It is noted that any citations to specific, pages, columns, lines, or figures in the prior art references and any interpretation of the references should not be considered to be limiting in any way. A reference is relevant for all it contains and may be relied upon for all that it would have reasonably suggested to one having ordinary skill in the art. See, MPEP 2123.

Response to Arguments

8. Applicant's arguments filed 02/16/2007 have been fully considered but they are moot in view of the new ground(s) of rejection. This office action is a Non-Final Rejection in order to give the applicant sufficient opportunity to response to the new line of rejection. are persuasive. The reason is set forth in the current Office Action cited above and further view of the following:

Brief description of cited prior arts:

Bickmore (see Bickmore at pages 534-546, "Automated re-authoring system", also see Fig. 4, 7 and 8) discloses automatically converts web-based documents designed for desktop viewing into formats appropriate for handheld devices with small display screens, such as Palm-PCs, PDAs, and cellular phones, wherein single style sheet defines a set of display attributes for different structural portions of a document,

The Digestor includes,

- a heuristic planning algorithm and
- a set of structural page transformations to produce the 'best' looking document for a given display size.

Digestor can also be instructed, via a scripting language, to render portions of documents, thereby avoiding navigation through many screens of information. Two versions of Digestor have been deployed,

- one that reauthors HTML into HTML for conventional browsers and
- one that converts HTML into HDML for Phone.com's micro-browsers. Digestor provides a crucial technology for rapidly accessing, scanning and processing information from arbitrary web-based documents from any location reachable by wired or unwired communication.

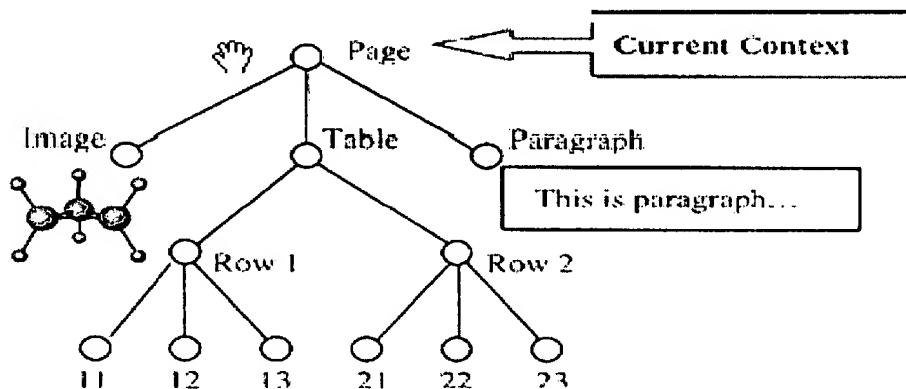
Balasubramaniam discloses a method for abstracting statistically analyzes the document and then summarizes the document, wherein the abstractor parses the markup language document to generate a syntax tree with a number of nodes before it is analyzed statistically and classifying each node into a predefined category based on the collected statistical information of the annotated syntax tree; and summarizing the classified nodes to create a hyperlinked abstract of the document to be presented at an output device (see Balasubramaniam col. 1 line 65 through col. 2 line 30).

Applicant argues that references do not teach:

“wherein a folder can be expanded to display information content, and wherein unexpanded folder titles are displayed along with the information content of the expanded foldery.” (See remarks page 14)

The Examiner disagrees.

As discuss in the rejection above, Specifically, Bickmore teaches the navigation between webpages (see Bickmore page 543 section 3.4.4 anf fig. 3, and 9-10), fig 9 shows a web page and its content (i.e. root node is page , includes children such as, image, table, paragraph...).



Art Unit: 2176

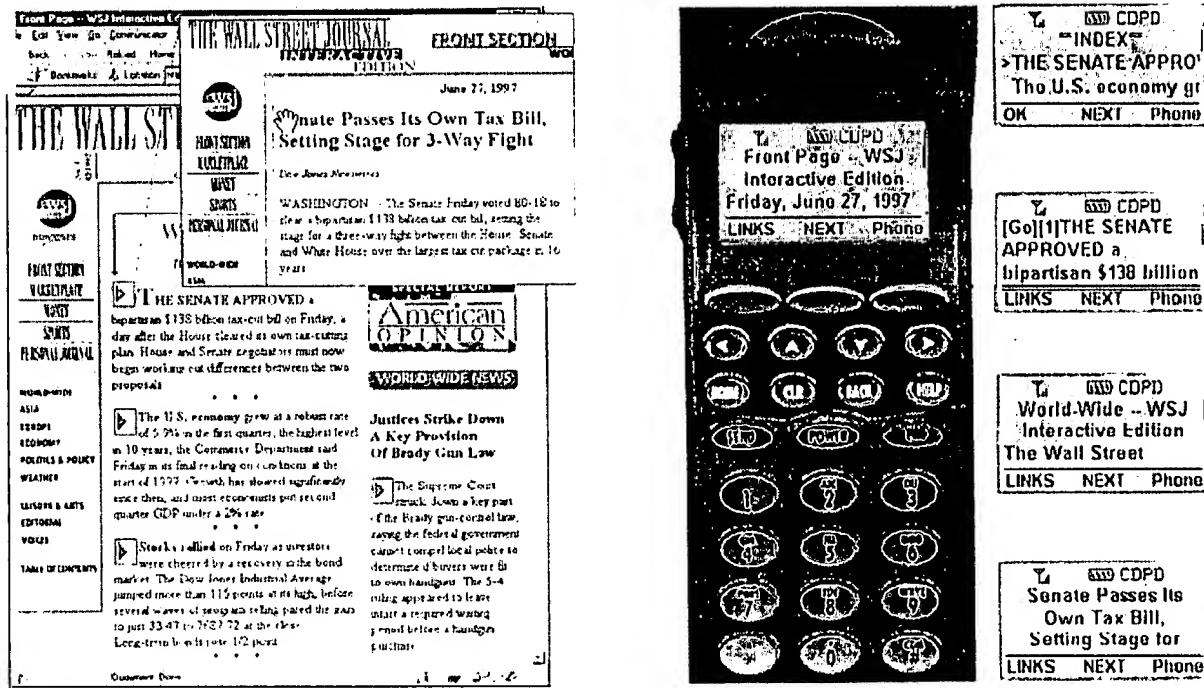


FIGURE 3. Re-authoring of web pages for a cellular phone display.

Also, see Bickmore at fig. 3 illustrates the Digestors'd re-authoring capability for a cell phone display (the front page of the wall street journal) that is capable of expanding and unexpanding the page.

In addtion, as discuss in the rejection above, Specifically Ba teaches a method for abstracting statistically analyzes the document and then summarizes the document, wherein the abstractor parses the markup language document to generate a syntax tree with a number of nodes before it is analyzed statistically and classifying each node into a predefined category based on the collected statistical information of the annotated syntax tree; and summarizing the classified nodes to create a hyperlinked abstract of the document to be presented at an output device (see Balasubramaniam col. 1 line 65 through col. 2 line 30).

Also, See Ba at col. 1 line 65 through col. 2, line 15, teaching the summarization step can be performed heuristically input from a user for grouping process which can depend on the output device and the connection to the output device. This grouping process can also depend on the class a node belongs to, and user preferences.

Also, see Ba at col. 1 line 65 through col. 2, line 15, teaching the summarization step can be performed heuristically input from a user for grouping process which can depend on the output device and the connection to the output device. This grouping process can also depend on the class a node belongs to, and user preferences.

In addition, Applicant argues that references do not teach:

“removing node that do not effect, and applying change to the document tree” (See remarks page 14).

The Examiner disagrees.

As discuss in the rejection above, Specifically, Bickmore at fig. 3 illustrates the Digestors'd re-authoring capability for a cell phone display (the front page of the wall street journal) that is capable of expanding and unexpanding the page.

Art Unit: 2176

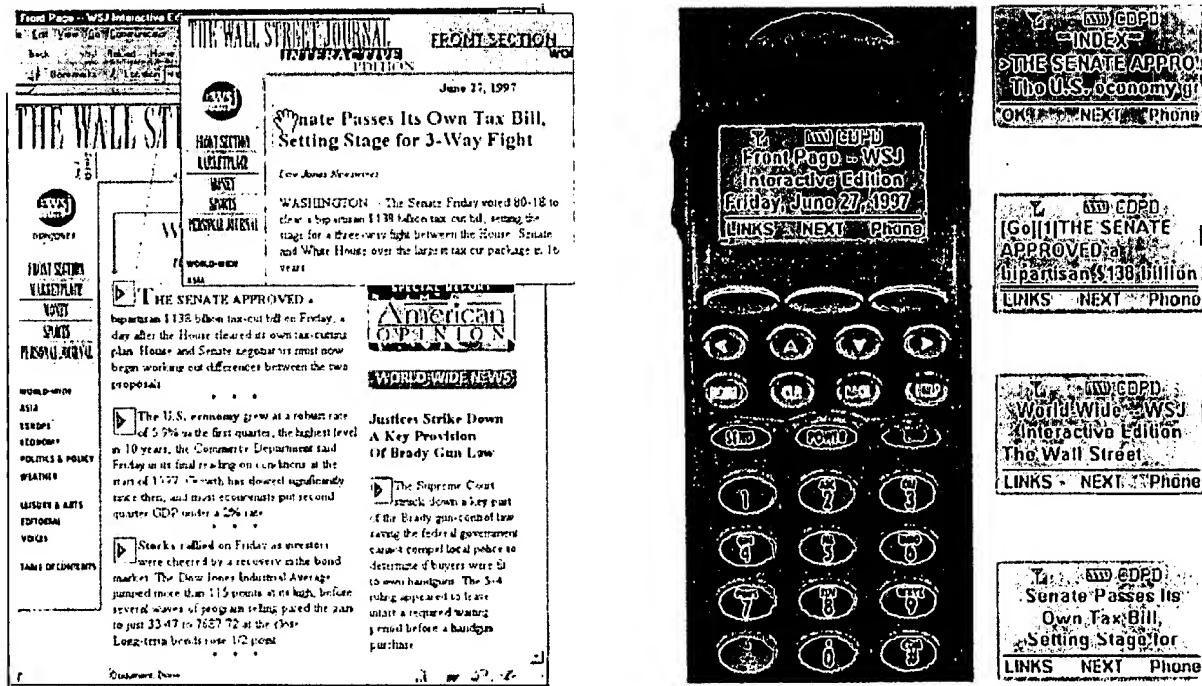


FIGURE 3. Re-authoring of web pages for a cellular phone display.

also, see (Bickmore fig. 4-8 and at pages 534--546, "Automated re-authoring system", discloses an automated re-authoring system that implements the re-authoring engine that uses heuristics to generate pages customized for the specific device upon which they will be displayed. if screen space is too limited or the client device cannot display images; Digestor will remove them from

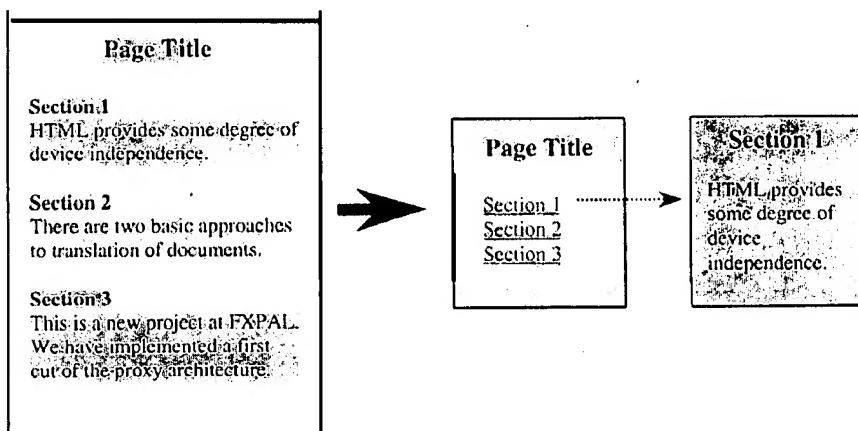


FIGURE 4. Section outlining transform.

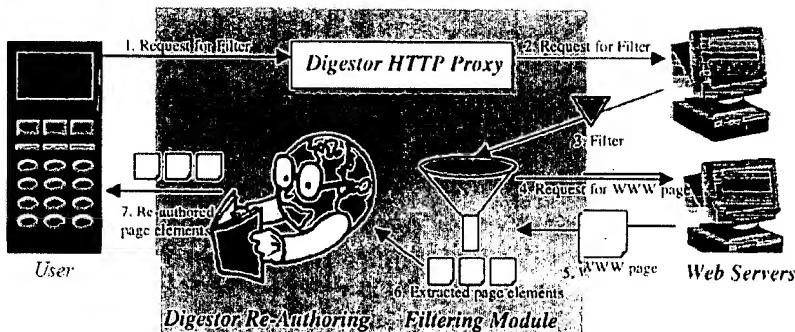


FIGURE 7. Example of dataflow in the document filtering module.

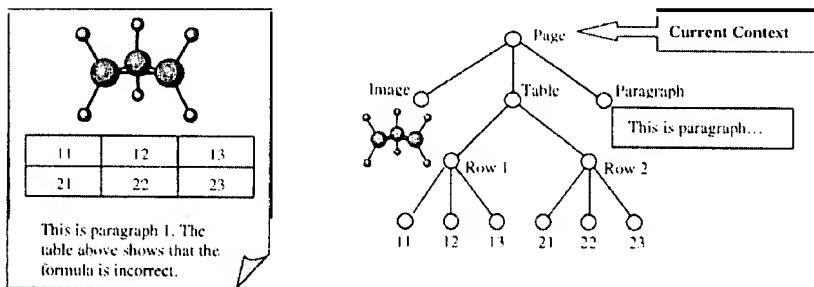


FIGURE 8. Example WWW page and corresponding AST. The current context is set to root of the AST

In addition, Applicant argues that references do not teach “**object array**.” (See remarks page 15).

The Examiner disagrees.

As discuss in the rejection above, Specifically, Bickmore teaches All re-authored sub-pages are cached by Digestor as transformed parse trees. As the user navigates a transformed document and requests sub-pages, the corresponding trees are rendered in a markup language and sent to the client (see Bickmore at page 540 bottom – right column), and also the current application specification at page 4 lines 10-20, discloses “an array structure. Based on the nodes of the object tree. In the manner, the QDOM extends the World Wide Web Consortium (W3C)

DOM interface definition to an efficient model that provides high speed parsing, storage, and access while minimizing memory resource requirements.”

In addition, Applicant argues that references do not teach:

“object array.” (See remarks page 15).

The Examiner disagrees.

As discuss in the rejection above, Specifically Bickmore discloses an automated re-authoring system that implements the re-authoring engine that uses heuristics to generate pages customized for the specific device upon which they will be displayed. if screen space is too limited or the client device cannot display images; Digestor will remove them from the document. Also provides the CSS, a single style sheet defines a set of display attributes for different structural portions of a document (e.g. all top-level section headings are to be displayed in red 18- point Times font). A series of style sheets may be attached to a document, each with a weight describing its desirability to the document’s author (See Bickmore fig. 4-8 and at pages 534--546, “Automated re-authoring system”).

In addition, Applicant argues that references do not teach:

“normalization markup provides at least one specific.” (See remarks page 15).

The Examiner disagrees.

As discuss in the rejection above, Specifically Bickmore discloses an automated re-authoring system that implements the re-authoring engine that uses heuristics to generate pages customized for the specific device upon which they will be displayed, if screen space is too limited or the client device cannot display images; Digestor will remove them from the document. Also provides the CSS, a single style sheet defines a set of display attributes for different structural portions of a document (e.g. all top-level section headings are to be displayed in red 18- point Times font). A series of style sheets may be attached to a document, each with a weight describing its desirability to the document’s author (See Bickmore fig. 4-8 and at pages 534--546, “Automated re-authoring system”).

Also, Bickmore teaches the Digestor system automatically converts web-based documents designed for desktop viewing into formats appropriate for handheld devices with small display screens, such as Palm-PCs, PDAs, and cellular phones. Digestor employs a heuristic planning algorithm and a set of structural page transformations to produce the ‘best’ looking document for a given display size (see Bickmore at page 534 section 1 the introduction), also see Bickmore at page 541 section 3.3.4 teaching the Digestor system automatically converts web-based documents using Handheld device markup language (HDML). And also see the current application specification page 16 lines 1-5, discloses “ providing normalizer functionality, the system can also use templates and meta-tag markup to alter the original

information content to better suit an end user application for which it was not originally designed."

Thus a *prima facie* case has been established and therefore the Examiner respectfully maintains the rejection of independent claims 1, 16, 20, 23, 27, 31 and 39 and their dependencies for at least the reason cited above at this time.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tran A. Quoc whose telephone number is 571-272-8664. The examiner can normally be reached on 9AM - 5PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather R. Herndon can be reached on 571-272-4136. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Quoc A. Tran
May-10-2007


Doug Mutton
Primary Examiner
Technology Center 2100

5/10/07